

A mole is defined as the mass of the substance which consists of the equal quantity of basic units. Example atoms in 12 grams are the same as 12C. The basic units can be molecules, atoms or formula units based on the substance.

A mole fraction indicates the number of chemical elements. One mole of any substance is equal to the value of 6.023×10^{23} (Avagadro number). It can be used to measure the products obtained from the chemical reaction. The unit is denoted by **mol**.

The formula for the number of moles formula is expressed as

$$\text{Number of Moles} = \text{Mass of substance} / \text{Mass of one mole}$$

Solved Examples On Number Of Moles Formulas

Example 1: Determine the number of moles in 95g of MnO_2 .

Solution:

Given

$$\text{Mass of } \text{MnO}_2 = 95\text{g}$$

$$\text{Mass of one mole } \text{MnO}_2 = 86.94\text{g}$$

Number of moles formula is

$$\text{Number of moles} = \text{Mass of substance} / \text{Mass of one mole}$$

$$\text{Number of moles} = 95 / 86.94$$

$$\text{Number of moles} = 1.092 \text{ mol}$$

Comments

Leave a Comment

Your Mobile number and Email id will not be published. Required fields are marked *

Type your message or doubt here...

//

Post My Comment



greeeballa hassan elobied

January 21, 2020 at 12:32 pm

(<https://byjus.com/number-of-moles-formula/#comment-54157>)

Very clear and to the point

Reply

(<https://byjus.com/number-of-moles-formula/?replytocom=54157#respond>)



Lidwina Sheyapo

July 6, 2020 at 8:25 pm

(<https://byjus.com/number-of-moles-formula/#comment-115409>)

how do you solve such a problem find the total number of atoms in three moles of ammonium sulphate

Reply

(<https://byjus.com/number-of-moles-formula/?replytocom=115409#respond>)

